CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. 87-089
NPDES NO. CA0006343

REISSUING WASTE DISCHARGE REQUIREMENTS FOR:

CALGON CORPORATION
SOUTH SAN FRANCISCO
SAN MATEO COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region, (hereinafter the Board) finds that:

1. Calgon Corporation, a subsidiary of Merck and Company, Inc., hereinafter the discharger, by application dated October 22, 1986, has applied for reissuance of waste discharge requirements and a permit to discharge waste under the National Pollutant Discharge Elimination System (NPDES). The application was amended by letters dated January 30, 1987 and June 12, 1987.

2. The discharger's wastewater consists solely of industrial waste which results from the manufacturing of magnesium hydroxide and other magnesium products produced by lime and dolomite addition and selective precipitation from Bay water. The waste is essentially inorganic and the effluent consists primarily of returned Bay water from their precipitation process. The wastewater also contains magnesium and calcium salts, filtrates, wash water, sealing water from their rotary vacuum filter pumps, flue gas scrub water, filter backwash water, boiler blowdown, Bay water foamate, and laboratory wastes. Sanitary sewage is discharged to the City of South San Francisco's sewer system.

3. The report of waste discharge describes the existing discharge as follows: The average discharge rate is 4.2 million gallons per day (mgd) and the maximum rate is 6.2 mgd. Effluent treatment consists of grit and sand removal and partial pH neutralization. After treatment the effluent is combined with the effluents from the waste treatment plants of the Cities of South San Francisco/San Bruno (SSF/SB), Millbrae, and Burlingame, and the SF International Airport. The combined flow is dechlorinated and discharged into lower San Francisco Bay, a water of the State and United States, at a point northeast of Point San Bruno through a submerged diffuser about 5300 feet offshore at a depth of 20 feet below mean lower low water. [Latitude 37 deg., 39 min., 55 sec.; Longitude 122 deg., 21 min., 41 sec.]

4. The discharge is presently governed by Waste Discharge Requirements (WDR) Order No. 82-8 which allow discharge into San Francisco Bay.

5. The Regional Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986. The Basin Plan contains water quality objectives for lower San Francisco Bay and contiguous waters.

6. The beneficial uses of lower San Francisco Bay and contiguous water bodies are:

   Contact and Non-contact Water Recreation
   Wildlife Habitat
   Preservation of Rare and Endangered Species
   Estuarine Habitat
   Fish Migration and Spawning
   Industrial Service Supply
   Shellfish Harvesting
   Navigation
   Commercial and Sport Fishing

7. Effluent limitations, toxic effluent standards, established pursuant to Section 301, 304, and 307 of the Clean Water Act and amendments thereto are applicable to the discharge.

8. Effluent limitation guidelines requiring the application of best available technology economically achievable (BAT) for this point source category have not been promulgated by the U. S. Environmental Protection Agency. Effluent limitations of this Order are based on the Basin Plan, State Plans and policies, current plant performance, and best engineering judgement. The limitations are considered to be those attainable by BAT, in the judgement of the Board.

9. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21000 of Division 13) of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code.

10. The Board has notified the discharger and interested agencies and persons of its intent to reissue waste discharge requirements for the discharge and has provided them with an opportunity for a public hearing and an opportunity to submit their written views and recommendations.

11. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED THAT Calgon Corporation in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. Discharge Prohibitions

1. Discharge at any point at which the wastewater does not recieve an initial dilution of at least 10:1 is prohibited.

2. Bypass or overflow of untreated or partially treated wastewater to waters of the State, either at the treatment plant or from any of the collection system and pump stations tributary to the treatment plant is prohibited.

3. The monthly average daily flow shall not exceed 6.2 mgd. The average shall be calculated using only those days during the month when the

plant is in operation.

B. Effluent Limitations

1. The waste before discharge into the combined forcemain-outfall shall have a pH of not less than 6.0 nor greater than 9.0. This requirement shall be waived when the combined effluent, as discharged through the combined forcemain-outfall, has a pH of not less than 6.0 nor greater than 9.0.

2. In any representative set of samples, the waste before discharge into the combined forcemain-outfall shall meet the following limit of toxicity: The survival of test fishes in 96 hour bioassays of the effluent shall be a 90 percentile value of not less than 50 percent survival. Compliance with this requirement may be demonstrated by using effluent samples for which the pH has been adjusted to the pH of the combined effluent as discharged from the subregional outfall.

C. Receiving Water Limitations

1. The discharge of waste shall not cause the following conditions to exist in waters of the State at any place:

   a. Floating, suspended, or deposited macroscopic particulated matter or foam;

   b. Bottom deposits or aquatic growths;

   c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;

   d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;

   e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.

   f. Unnatural changes in turbidity or light transmittance where change impairs beneficial use. Increases from normal background light penetration or turbidity relatable to waste discharge shall not be greater than 10 percent in areas of 10 JTU or more. Waters of characteristically low natural turbidity (high clarity) shall be maintained so that discharges do not cause visible, aesthetically undesirable contrast with the natural appearance of the water.

   g. Substances that will form detrimental deposits and material that can cause or induce formation of combinations or amounts of deposited materials that can be deleterious to beneficial uses of waters and underlying surfaces, with or without resuspension of any deposits.

2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the

water surface:

a.	Dissolved oxygen	5.0 mg/l minimum. Median of any three consecutive months shall not be less than 80% saturation. When natural factors cause lesser concentration(s) than those specified above, then this discharge shall not cause further reduction in the concentration of dissolved oxygen.
b.	Dissolved sulfide	0.1 mg/l maximum
c.	pH	Variation from natural ambient pH by more than 0.5 pH units.
d.	Un-ionized ammonia	0.025 mg/l as N Annual Median 0.4 mg/l as N Maximum

3. The discharge shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Clean Water Act and regulations adopted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Clean Water Act, or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.

D. Provisions

1. Storm runoff from all processing areas of the plant site shall be collected and routed for discharge through the joint outfall.

2. The requirements prescribed by this Order supersede the requirements prescribed by Order No. 82-8 adopted on March 17, 1982. Order No. 82-8 is hereby rescinded.

3. Where concentration limitations in mg/l are contained in this permit, the following mass emission limitations shall also apply:

   Mass Emission Limit in (lbs/day or kg/day) = Concentration Limit in mg/l x (8.34 or 3.79) x Actual Flow in mgd averaged over the time interval to which the limit applies.

4. The discharger shall comply with all sections of this Order immediately upon adoption.

5. A Best Management Practices (BMP) program shall be developed and submitted to the Board by April 15, 1988. A summary of the requirements of the BMP program is attached. The discharger shall also review and update by April 15, annually, its BMP program including the contingency plan. The discharge of pollutants in violation of this Order where the discharger has failed to develop and/or implement a BMP program including the contingency plan will be basis for considering such discharge a willful and negligent violation of this Order pursuant to Section 13387 of the California Water Code.

6. The discharger shall comply with the self-monitoring program as adopted by the board and as may be amended by the Executive Officer.

7. The discharger shall comply with all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986 except B.3, C.11, E.4, E.7, E.9, E.10, E.15, E.16, and E.20.

8. All applications, reports, or information submitted to the Regional Board shall be signed and certified pursuant to Environmental Protection Agency regulations (40 CFR 122.41K).

9. Pursuant to Environmental Protection Agency regulations [40 CFR 122.42(a)] the discharger must notify the Regional Board as soon as it knows or has reason to believe (1) that it has begun or expects to begin to use or manufacture a pollutant not reported in the permit application, or (2) a discharge of a toxic pollutant not limited by this permit has occurred, or will occur, in concentrations that exceed the specified limits.

10. The discharger shall notify the Board not later than 180 days in advance of implementation of any plans to alter production capacity of the product line of the manufacturing, producing or processing facility by more than ten percent. Such notification shall include estimates of proposed production rate, the type of process, and projected effects on effluent quality. Notification shall include submittal of a new report of waste discharge and appropriate filing fee.

11. The discharger shall submit to the Board, by January 30 of each year, an annual summary of the quantities of all chemicals, listed by both trade and chemical names, which are used for cooling and/or boiling water treatment and which are discharged.

12. This Order expires July 15, 1992. The discharger must file a Report of Waste Discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

13. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the Clean Water Act or amendments thereto, and shall become effective 10 days after the date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

I, Roger B. James, Executive Officer do hereby certify the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region on July 15, 1987.

ROGER B. JAMES
Executive Officer

Attachments:

Standard Provisions & Reporting
Requirements, December 1986
Self-Monitoring Program
Resolution 74-10
Best Management Practices Summary

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM
FOR

CALGON CORPORATION

SOUTH SAN FRANCISCO

SAN MATEO COUNTY

NPDES NO. CA 0006343

ORDER NO. 87-089

CONSISTS OF

PART A, dated December 1986

AND

PART B

PART B

CALGON CORPORATION

I. DESCRIPTION OF SAMPLING STATIONS

A. EFFLUENT

Station	Description
E-001	At any point in the interceptor from the discharger's facilities between the point of connection with the subregional outfall and the point at which all of the discharger's waste tributary to that interceptor is present.
E-002	At any point in the subregional outfall after dechlorination between the point of discharge into San Francisco Bay and the point at which all waste tributary to that combined outfall is present.

B. RECEIVING WATERS

Station	Description
C-1	At a point in San Francisco Bay located over the geometric center of the outfall's discharge ports.
C-2	At a point in San Francisco Bay located midway between C-1 and C-3.
C-3	At a point in San Francisco Bay located in the center of the waste plume.
C-50-SW	At a point in San Francisco Bay, located 50 feet southwesterly, along the outfall line shoreward from Station C-1.
C-50-NW	At a point in San Francisco Bay, located 50 feet northwesterly from Station C-1, normal to the outfall line.
C-50-NE	At a point in San Francisco Bay located 50 feet northeasterly from Station C-1, along the outfall line extended.
C-50-SE	At a point in San Francisco Bay located 50 feet southeasterly from Station C-1 normal to the outfall.

C-300-N through C-300-NW (8 stations)	At a point in San Francisco Bay located on a 300 foot radius from the geometric center of the outfall diffuser, at equidistant intervals, with Station C-300-SW located shoreward from Station C-1 at the outfall line.
C-R-NW	At a point in San Francisco Bay located approximately 1500 feet northerly from the point of discharge.
C-R-SE	At a point in San Francisco Bay, located approximately 1500 feet southeasterly from the point of discharge.

C. LAND OBSERVATIONS

Station	Description
L	Located along the periphery of the eastern fenced perimeter of the facility, downhill and adjacent to the grit and lime sludge holding area, at intervals, not to exceed 100 feet. (A sketch showing the locations of these stations which is acceptable to the Executive Officer will be submitted.)

II. SCHEDULE OF SAMPLING AND ANALYSIS

A. The schedule of sampling and analysis shall be that given as Table I.

III. MODIFICATION OF PART "A", DATED 12/86

A. Exclusions: Does not include the following paragraphs of Part A: Paragraphs C.6., C.7., C.8., C.11., C.12., D.1., D.2.d, e, and g, D.3., D.5., E.4.a, c, and d, E.5., and F.5.

I, Roger B. James, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedure set forth in the Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 87-089.

2. Is effective on the date shown below.

3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger and revisions will be ordered by the Executive Officer.

ROGER B. JAMES
Executive Officer

Effective Date July 16, 1987

Attachments:
Table I and Legend for Table I

TABLE I

SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSES (5)

SAMPLING STATIONS	E-001		E-002		C (4)	L		
TYPE OF SAMPLES	C-24	G	C-24	G	G			
Flow Rate (mgd)		Cont						
Settleable Matter (ml/l-hr & cu. ft/day)		2/W						
Total Suspended Matter (mg/l & kg/day)	2/W							
Fish Toxicity, % Survival in undiluted waste	(1) M		(3) M					
Turbidity (Jackson Turbidity Units)					1/M			
pH (units) (2)		(2) Cont		(2) Cont	1/M			
Apparent Color (Color units)					1/M			
All Applicable Standard Observations		5/W			1/M	5/W		
Dissolved Oxygen (mg/l and % Saturation)					1/M			
Secchi Disk (inches)					1/M			
Temperature (°C)					1/M			

LEGEND FOR TABLE

TYPES OF SAMPLES

G = grab sample
C-24 = composite sample - 24-hour

TYPES OF STATIONS

E = waste effluent stations
C = receiving water stations
L = land retention area

FREQUENCY OF SAMPLING

D = once each day
W = once each week
M = once each month
2/W = 2 days per week
2/Y = once in March and once in Sept.
5/W = 5 days per week
2W = every 2 weeks
Cont = continuous

FOOTNOTES

(1) Prior to the toxicity test, the discharger may adjust the undiluted waste pH to the average pH of the preceeding 24 hours of the combined effluent as discharged from the subregional outfall. Sampling date should coincide with date of sampling for total suspended solids and settleable solids in E-001.

(2) The discharger shall monitor pH continuously at both E-001 and E-002 and report the results (E-001 compliance need not be reported except for the times of noncompliance at E-002) in the discharger's monthly Self-Monitoring Reports. At his option the discharger may use pH monitored continuously at E-002 to establish compliance with effluent limitations. Continuous monitoring pH equipment shall be calibrated at least weekly and the results reported in the discharger's monthly Self-Monitoring Reports.

Minimum and maximum daily pH values and the time of their occurrence shall be reported, in addition to:

a. The number of events when pH was outside the 6.0 to 9.0 pH range

b. The total (cumulative) hours and minutes that pH was outside the 6.0 to 9.0 pH range

c. The duration of each and every event when the pH was outside the 6.0 to 9.0 range

(3) Sample for bioassay at E-002 to be taken coincident with sample at E-001. Sample pH shall not be adjusted. The discharger may use bioassay results from a sample taken on the appropriate day at E-002 by North Bayside System Unit.

(4) The discharger may use receiving water analyses results from sampling done by the North Bayside System Unit.

(5) Monitoring is not required when the plant is not operating.